

**WHAT IS CLAIMED IS:**

1. A method for making a molded article with decreased levels of acetaldehyde, comprising:
  - (a) providing a thermoplastic molding composition comprising (i) a polymer component selected from the group consisting of polyethylene terephthalate, a copolyester of polyethylene terephthalate, and a combination of polyethylene terephthalate and a copolyester of polyethylene terephthalate; and (ii) a polymer additive comprising one or more than one hydroxylic compound comprising from 3 to about 8 hydroxy groups; and
  - (b) injection molding the thermoplastic molding composition to form a molded article; where the amount of one or more than one hydroxylic compound is sufficient to decrease the level of acetaldehyde in the molded article that would otherwise result without including the one or more than one hydroxylic compound in the thermoplastic molding composition.
- 10 2. The method of claim 1, where the hydroxylic compound is selected from the group consisting of an aliphatic hydroxylic compound, an aliphatic-cycloaliphatic hydroxylic compound and a cycloaliphatic hydroxylic compound.
- 15 3. The method of claim 1, where the hydroxylic compound is selected from the group consisting of triglycerin, trimethylolpropane, dipentaerythritol, tripentaerythritol, D-mannitol, D-sorbitol and xylitol.
- 20 4. The method of claim 1, where the amount of the one or more than one hydroxylic compound is from about 0.0001 % to about 2 % by weight of the polymer component.
- 25 5. The method of claim 1, where two of the hydroxy groups of the hydroxylic compound are separated from one another by exactly one carbon atom.
6. The method of claim 1, where the polymer additive further comprises a liquid carrier.
7. The method of claim 6, where the one or more than one hydroxylic compound is substantially uniformly distributed in the liquid carrier.

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8. The method of claim 6, where the ratio of the weight of the hydroxylic compound to the weight of the liquid carrier is from about 0.1:1 to about 1.5:1.

9. The method of claim 6, where the liquid carrier comprises a polyester-compatible organic oil-based vehicle.

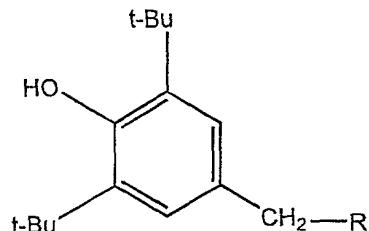
5 10. The method of claim 1, where the polymer additive further comprises one or more than one polyester-compatible colorant.

11. The method of claim 1, where the polymer additive further comprises an antioxidant.

12. The method of claim 11, where the antioxidant is a hindered phenol antioxidant.

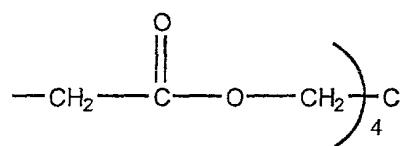
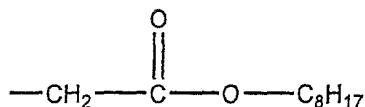
10 13. The method of claim 11, where the antioxidant is selected from the group consisting of a 4-substituted-2,6-di-tertiary butyl phenol and an  $\alpha$ -tocopherol.

14. The method of claim 11, where the antioxidant has the formula:

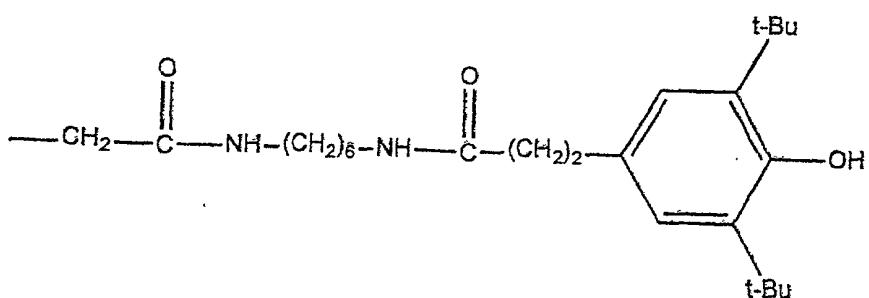
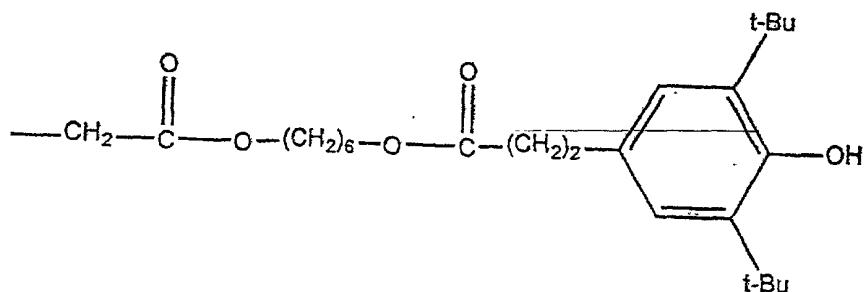


15 in which R is hydrogen,

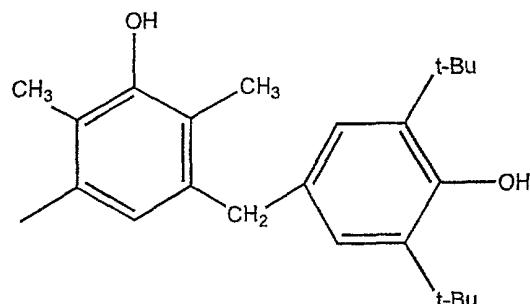
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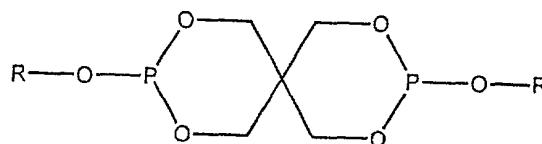
15  
or



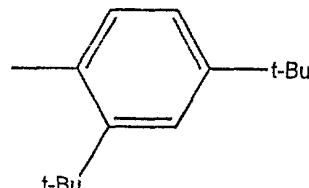
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15. The method of claim 11, where the antioxidant comprises d,l- $\alpha$ -tocopherol.
16. The method of claim 11, where the antioxidant comprises a phosphite antioxidant.
17. The method of claim 16, where the phosphite antioxidant has the structure:

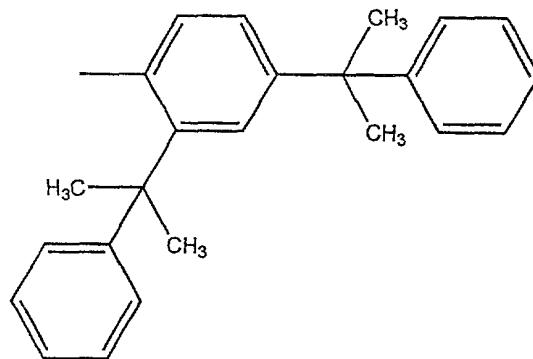
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5 in which R is



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15 20 or C<sub>18</sub>H<sub>37</sub>.

18. The method of claim 1, where the thermoplastic molding composition further comprises one or more than one polyester-compatible colorant.

19. The method of claim 1, where the thermoplastic molding composition further comprises an antioxidant.

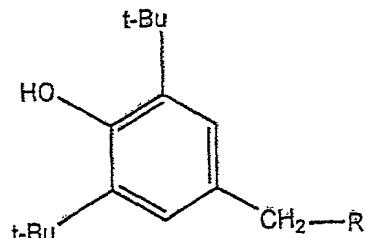
25 20. The method of claim 19, where the antioxidant is a hindered phenol antioxidant.

21. The method of claim 19, where the antioxidant is selected from the group consisting of a 4-substituted-2,6-di-tertiary butyl phenol and an  $\alpha$ -tocopherol.

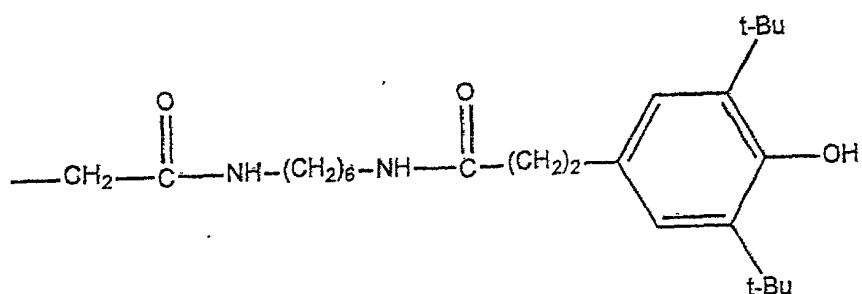
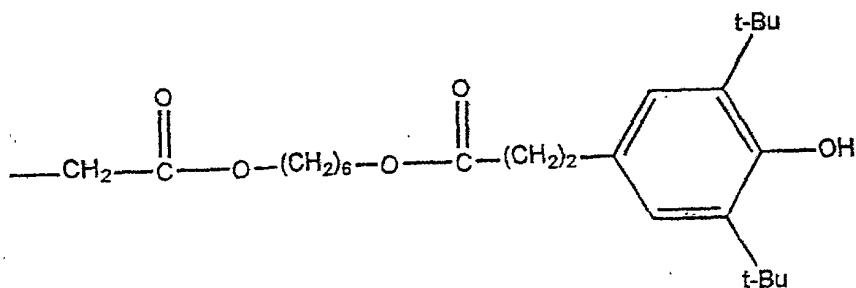
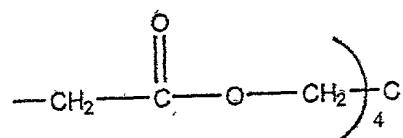
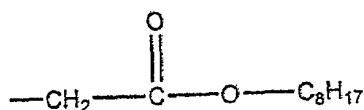
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22. The method of claim 19, where the antioxidant has the formula:

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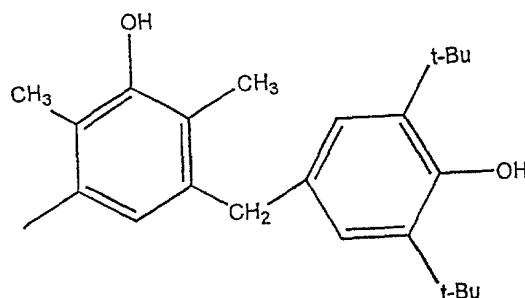
where R is hydrogen,



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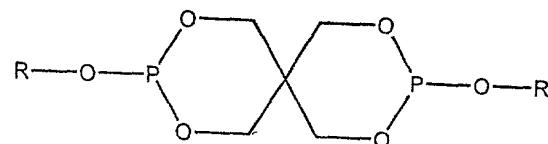
or

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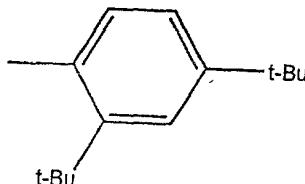
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23. The method of claim 19, where the antioxidant comprises d,l- $\alpha$ -tocopherol.
24. The method of claim 19, where the antioxidant comprises a phosphite antioxidant.
25. The method of claim 24, where the phosphite antioxidant has the structure:

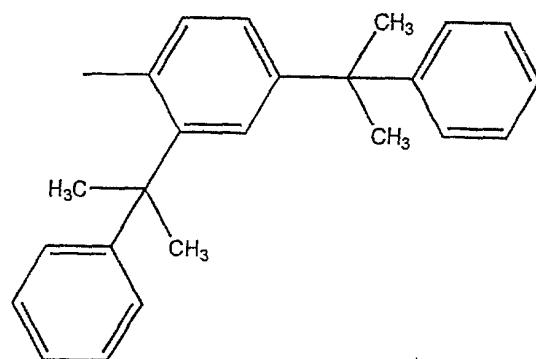


15 where R is

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or C<sub>18</sub>H<sub>37</sub>.

26. The method of claim 1, where the polymer component further comprises a polyamide.

5 27. The method of claim 1, where the molded article is a preform for use in a forming a bottle.

28. The method of claim 1, where the molded article is a bottle.

29. A preform for use in a forming a bottle made according to the method of claim 1.

30. A bottle made using the preform of claim 29.

31. A bottle made according to the method of claim 1.

10 32. A thermoplastic molding composition for making a molded article comprising:  
(i) a polymer component selected from the group consisting of polyethylene terephthalate, a copolyester of polyethylene terephthalate, and a combination of polyethylene terephthalate and a copolyester of polyethylene terephthalate; and  
(ii) a polymer additive comprising one or more than one hydroxylic compound comprising from 3 to about 8 hydroxy groups;  
where the amount of one or more than one hydroxylic compound is sufficient to decrease the level of acetaldehyde in the molded article that would be present without including the one or more than one hydroxylic compound in the thermoplastic molding composition.

15 33. The composition of claim 32, where the hydroxylic compound is selected from the group consisting of an aliphatic hydroxylic compound, an aliphatic-cycloaliphatic hydroxylic compound and a cycloaliphatic hydroxylic compound.

20 34. The composition of claim 32, where the hydroxylic compound is selected from the group consisting of triglycerin, trimethylolpropane, dipentaerythritol, tripentaerythritol, D-mannitol, D-sorbitol and xylitol.

25 35. The composition of claim 32, where the amount of the one or more than one hydroxylic compound is from about 0.0001% to about 2% by weight of the polymer

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component.

36. The composition of claim 32, where two of the hydroxy groups of the hydroxylic compound are separated from one another by exactly one carbon atom.

5 37. The composition of claim 32, where the polymer additive further comprises a liquid carrier.

38. The composition of claim 37, where the one or more than one hydroxylic compound is substantially uniformly distributed in the liquid carrier.

10 39. The composition of claim 37, where the ratio of the weight of the hydroxylic compound to the weight of the liquid carrier is from about 0.1:1 to about 1.5:1.

40. The composition of claim 37, where the liquid carrier comprises a polyester-compatible organic oil-based vehicle.

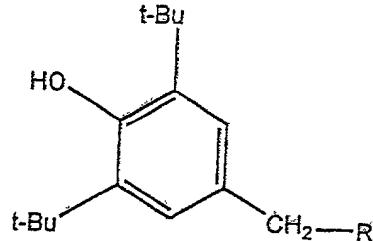
15 41. The composition of claim 32, where the polymer additive further comprises one or more than one polyester-compatible colorant.

42. The composition of claim 32, where the polymer additive further comprises an antioxidant.

43. The composition of claim 42, where the antioxidant is a hindered phenol antioxidant.

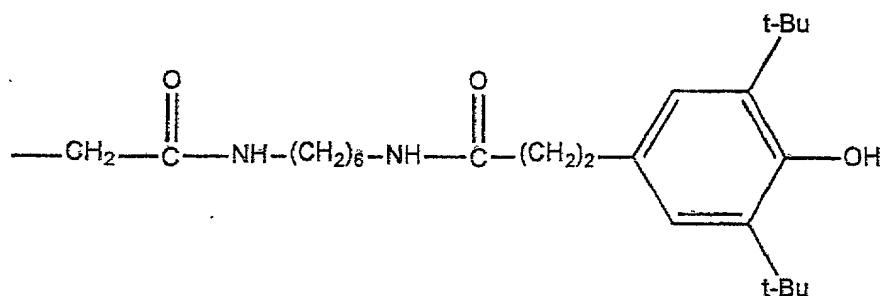
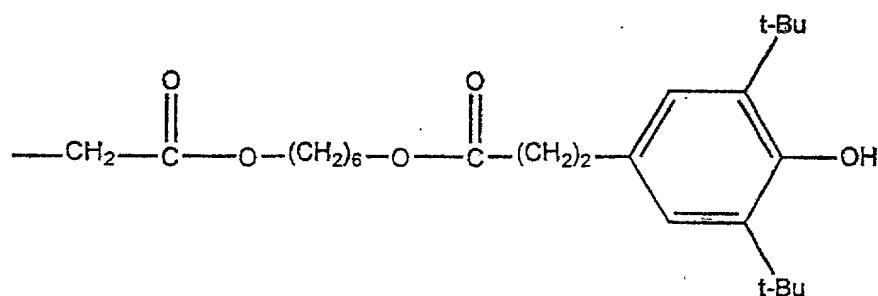
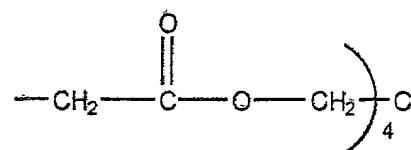
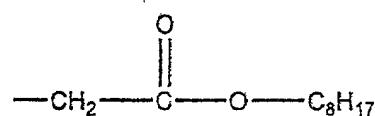
44. The composition of claim 42, where the antioxidant is selected from the group consisting of a 4-substituted-2,6-di-tertiary butyl phenol and an  $\alpha$ -tocopherol.

20 45. The composition of claim 42, where the antioxidant has the formula:

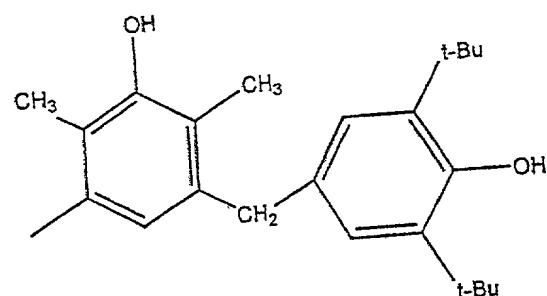


25 where R is hydrogen,

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or



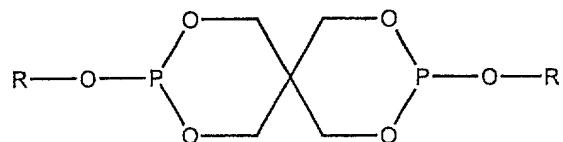
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46. The composition of claim 42, where the antioxidant comprises synthetic Vitamin

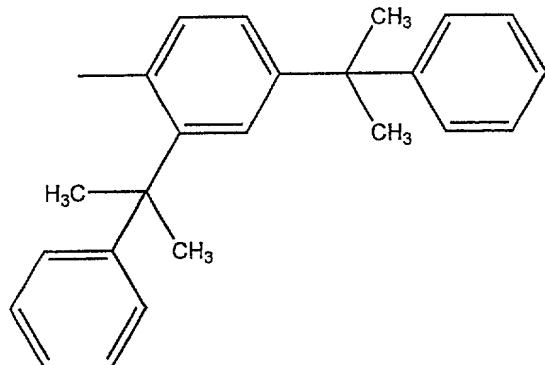
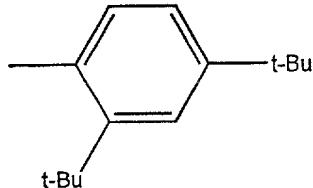
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47. The composition of claim 42, where the antioxidant comprises a phosphite antioxidant.

5 48. The composition of claim 47, where the phosphite antioxidant has the structure:



10 in which R is



or  $\text{C}_{18}\text{H}_{37}$ .

25 49. The composition of claim 32, where the thermoplastic molding composition

further comprises one or more than one polyester-compatible colorant.

50. The composition of claim 32, where the thermoplastic molding composition further

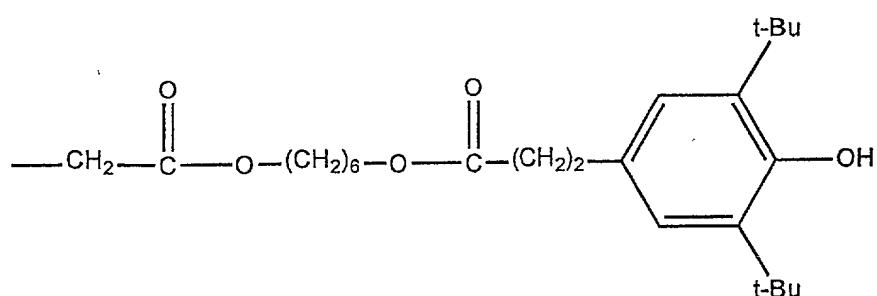
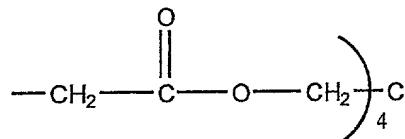
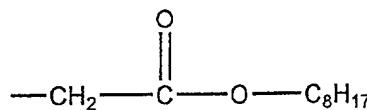
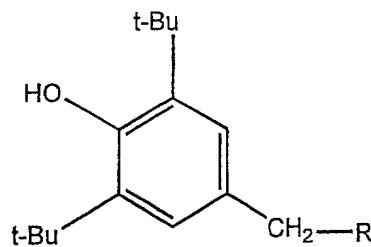
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comprises an antioxidant.

51. The composition of claim 50, where the antioxidant is a hindered phenol antioxidant.

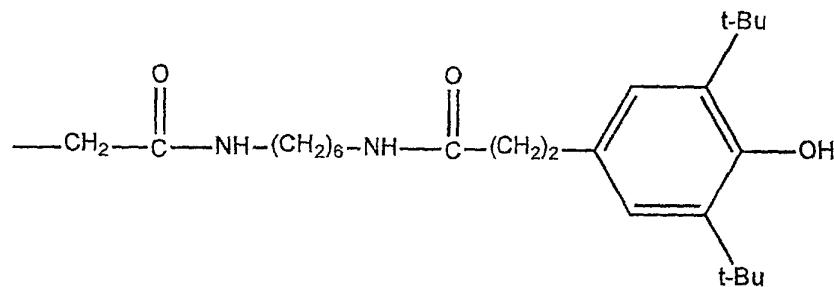
52. The composition of claim 50, where the antioxidant is selected from the group consisting of a 4-substituted-2,6-di-tertiary butyl phenol and an  $\alpha$ -tocopherol.

53. The composition of claim 50, where the antioxidant has the formula:

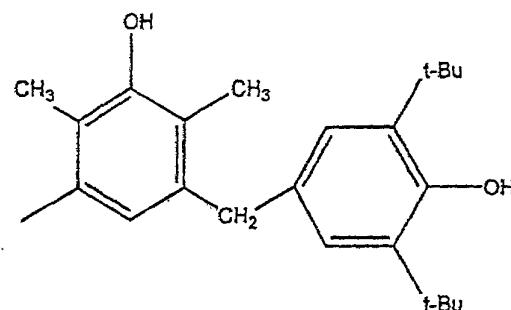


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5 or



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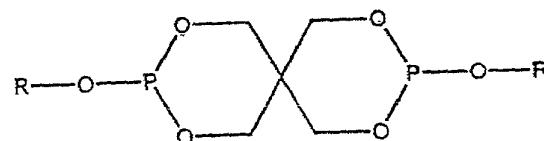
54. The composition of claim 50, where the antioxidant comprises synthetic Vitamin

15 E.

55. The composition of claim 50, where the antioxidant comprises a phosphite antioxidant.

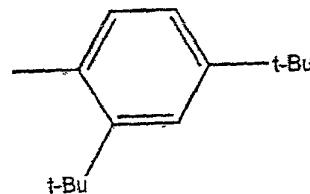
56. The composition of claim 55, where the phosphite antioxidant has the structure:

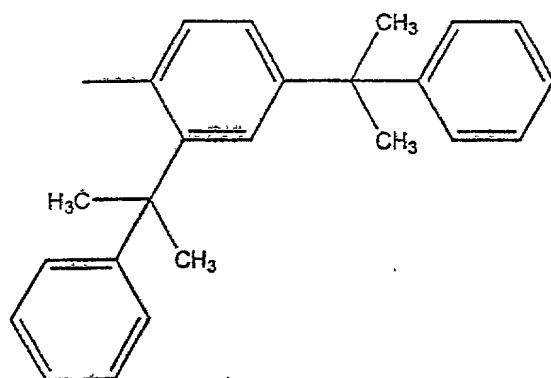
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where R is

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10 or C<sub>18</sub>H<sub>37</sub>.

57. The composition of claim 56, where the polymer component further comprises a polyamide.

58. A preform for use in a forming a bottle made with the thermoplastic molding composition of claim 32.

59. A bottle made of the preform of claim 58.

60. A bottle made with the thermoplastic molding composition of claim 32.

61. A molded article made with the thermoplastic molding composition, the thermoplastic molding composition comprising:

62. (i) a polymer component selected from the group consisting of polyethylene terephthalate, a copolyester of polyethylene terephthalate, and a combination of polyethylene terephthalate and a copolyester of polyethylene terephthalate; and

63. (ii) a polymer additive comprising one or more than one hydroxylic compound comprising from 3 to about 8 hydroxy groups;

64. where the amount of one or more than one hydroxylic compound is sufficient to decrease the level of acetaldehyde in the molded article that would be present without including the one or more than one hydroxylic compound in the thermoplastic molding composition.

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62. A preform comprising the molded article of claim 61.
63. A bottle comprising the molded article of claim 61.
64. The molded article of claim 61, where the decrease in the level of acetaldehyde is decreased from about 30% to about 70%.
- 5 65. The molded article of claim 61, where the thermoplastic molding composition further comprises colorant.